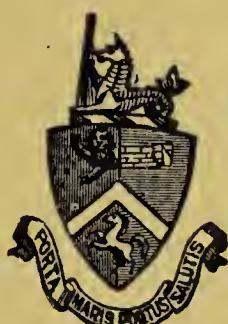


MARGATE Kent

## BOROUGH OF MARGATE.



# ANNUAL REPORT

FOR

1928

ON THE

## Health of Margate, Vital Statistics and Sanitary Work.

BY THE

Medical Officer of Health:  
ROWAN McCOMBE.

WITH WHICH IS INCLUDED THE

Report of the Sanitary Inspector  
AND THE  
Meteorological Report.

Margate:

W. J. PARRETT, LTD.,  
25, Cecil Square,  
1929.





**BOROUGH OF MARGATE.**

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**Annual Report**

OF THE

**Medical Officer of Health**

FOR THE YEAR 1928.

# BOROUGH OF MARGATE.

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## Mayor:

COUNCILLOR EDWARD TOFTS FASHAM (until Nov., 1928).  
ALDERMAN EDWARD COLEMAN (from Nov., 1928).

## Health Committee:

ALDERMAN HOUGHTON	COUNCILLOR PETTMAN.
(Chairman until Nov., 1928).	(Chairman from Nov., 1928).
ALDERMAN HUGHES.	COUNCILLOR DOWLING.
, LEACH LEWIS	, GILES.
(until Nov., 1928).	, GOODBAN.
, SHEA.	, LININGTON.
COUNCILLOR J. WOOD.	, A. S. REDMAN
, LESTER	(from Nov., 1928).

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## STAFF OF THE HEALTH DEPARTMENT:

*Medical Officer of Health, School Medical Officer, and  
Borough Meteorologist:*

ROWAN McCOMBE, F.R.C.S.I., D.P.H.

## *Chief Sanitary Inspector:*

JOHN RATTRAY, A.R.San.Inst. and Certified Inspector  
of Meat, &c.

## *Assistant Sanitary Inspectors:*

J. W. BROMLEY, A.R.San.Inst. and Cert. Inspector  
of Meat.

MISS J. DAVIES, Cert.R.San.Inst., S.R.N.

## *Health Visitor:*

MISS E. GREEN.

## *Clerk:*

L. R. HUTCHINSON.

## *Disinfecto:*

W. EPPS.

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Town Clerk ... ... ... ... ... ... EDWARD BROOKE.

Borough Surveyor ... ... ... ... ... ... E. A. BORG.

Public Analyst ... ERNEST M. HAWKINS, F.I.C., Canterbury.

Meteorological Observer ... ... ... ... CAPTAIN J. E. TURNER



*Your Worship the Mayor, Aldermen and Councillors  
of the Borough of Margate.*

GENTLEMEN,

I have the honour of submitting to you the Annual Report on the Health of the Borough for the year ended 31st December, 1928.

The Report is prepared in accordance with the instructions of the Ministry of Health, Article 14 (3), Sanitary Officers' Order, 1926, which states:—"The Annual Report for 1928 will be an ordinary report, that is, a report of a more simple character than the full survey report which the Medical Officer of Health was asked to prepare for 1925."

Several paragraphs in the Report have to be repeated each year for the information of the Ministry of Health and other public bodies.

I gratefully acknowledge the kind assistance accorded me at all times by the Chairman and Members of the Health Committee, also by my professional colleagues in the town, the Chief Sanitary Inspector, Assistant Sanitary Inspectors, Health Visitor, and Clerk, without which it would be impossible to carry out my duties satisfactorily.

I am, your Worship and Gentlemen,

Your obedient Servant,

ROWAN McCOMBE,

*Medical Officer of Health.*

April, 1929.

## **GENERAL STATISTICS.**

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Area (acres), 2,961.

Population (1928), 29,260.

Number of inhabited houses (1921), 5,159.

Number of inhabited houses (1928), approximately, 6,652.

Number of families or separate occupiers (1921), 5,888.

Rateable value, £349,866.

Sum represented by a penny rate, £1,457.

### **EXTRACTS FROM VITAL STATISTICS OF THE YEAR.**

Births: Legitimate—total, 352; male, 161; female, 191.

Illegitimate—total, 18; male, 8; female, 10.

Deaths: Total, 318; male, 145; female, 173.

Birth Rate (R.G.), 12.6 per 1,000.

Death Rate (R.G.), 10.9 per 1,000.

Number of Women dying in, or in consequence of, childbirth—  
from Sepsis, —; from other causes, —.

Deaths of Infants under one year of age per 1,000 births—  
legitimate, 39.8; illegitimate, 0; total, 37.8.

Deaths from Measles (all ages), 1.

Deaths from Whooping Cough (all ages), 1.

Deaths from Diarrhoea (under two years of age), 1.

**Deaths of "Residents" in Margate whether  
occurring in or beyond the district.**

CIVILIANS ONLY.

	Causes of Death.				Males.	Females
1	Enteric Fever	...	...	...	—	—
2	Small-Pox	...	...	...	—	—
3	Measles	...	...	...	—	1
4	Scarlet Fever	...	...	...	—	2
5	Whooping Cough	...	...	...	—	1
6	Diphtheria	...	...	...	1	—
7	Influenza	...	...	...	3	1
8	Encephalitis Lethargica	...	...	...	1	1
9	Meningococcal Meningitis	...	...	...	—	—
10	Tuberculosis of respiratory system	...	...	...	14	7
11	Other Tuberculous diseases	...	...	...	1	1
12	Cancer, malignant disease	...	...	...	25	33
13	Rheumatic Fever	...	...	...	1	—
14	Diabetes	...	...	...	2	2
15	Cerebral Haemorrhage, &c.	...	...	...	6	8
16	Heart Disease	...	...	...	28	40
17	Arterio-sclerosis	...	...	...	6	15
18	Bronchitis	...	...	...	4	2
19	Pneumonia (all forms)	...	...	...	4	4
20	Other respiratory diseases	...	...	...	1	3
21	Ulcer of Stomach or Duodenum	...	...	...	1	—
22	Diarrhoea, &c. (under 2 years)	...	...	...	1	—
23	Appendicitis and typhlitis	...	...	...	—	1
24	Cirrhosis of Liver	...	...	...	—	—
25	Acute and Chronic Nephritis	...	...	...	8	10
26	Puerperal Sepsis	...	...	...	—	—
27	Other Accidents and Diseases of Pregnancy and Parturition	...	...	...	—	—
28	Congenital Debility and Malformation, Premature Birth	...	...	...	6	2
29	Suicide	...	...	...	3	5
30	Other Deaths from Violence	...	...	...	2	1
31	Other Defined Diseases	...	...	...	27	33
32	Causes ill defined or unknown	...	...	...	—	—
All Causes				...	145	173
Special Causes (included above)						
	Poliomyelitis	...	...	...	—	—
	Polioencephalitis	...	...	...	—	—
Deaths of Infants under 1 year				Total	9	5
				Illegitimate	—	—
Total Births				...	169	201
Legitimate				...	161	191
Illegitimate				...	8	10
Population				...	29,260	

## GENERAL INFORMATION.

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The Borough of Margate extends over an area of 2,961 acres, situated on the north-east coast of Thanet, 72 miles from London and 16 from Canterbury (one of the best known Marine Health Resorts in the British Isles). The town is built between two valleys, and owing to this and the general undulations of the ground it is exceptionally favoured as regards surface drainage. The sewage drainage is of the most up-to-date construction and there is an excellent pure water supply. The hours of sunshine during 1928 amounted to 1,983 hours, sunshine being recorded on 311 days during the year. The atmosphere is rich in ultra-violet rays.

The estimated population for the purpose of calculating the birth and death rates, etc., as given by the Registrar General, is 29,260. This, in my opinion, is much too low, and it should be noted that the population during the height of the season exceeds 100,000. The number of inhabited houses in 1921, according to the census figures, was 5,159, and the number of families or separate occupiers, 5,888. The rateable value is £349,866, and the sum represented by a penny rate, £1,457.

**Birth Rate.** The number of births registered during the year was 169 males and 201 females, total 370, which is equivalent to a birth rate of 12.6 per 1,000.

**Death Rate.** The number of deaths registered during the same period was 145 males and 173 females, total 318, which is equivalent to a death rate of 10.9 per 1,000.

**Infantile Mortality.** The number of infants who died under the age of one year was 9 males and 5 females, total 14, which is equivalent to an Infantile Death Rate of 37.8 per 1,000.

This is the lowest Infantile Mortality rate ever recorded in Margate.

The inference to be drawn from the above figures is that the Birth Rate and the Death Rate, compared with the figures of previous years, are rather lower.

The principal causes of death were:—Heart Disease (68), Malignant Disease (58), Tuberculosis (23), Nephritis (18), Cerebral Haemorrhage, &c. (14), and Pneumonia (8).

It is very gratifying to report that there were no deaths from Puerperal Sepsis during the year.

#### GENERAL PROVISION OF HEALTH SERVICES FOR THE AREA.

**Hospitals.** With the exception of the Fever Hospital, there are no hospitals in the town provided or subsidized by the Local Authority. The County Council, however, send patients who are suffering from surgical tuberculosis and are recommended by their Tuberculosis Officers, to the Victoria Home and the Royal Sea Bathing Hospital. The Royal Sea Bathing Hospital has accommodation for 266 patients and the Victoria Home for 54. Both Hospitals are situated in Canterbury Road.

The Fever Hospital is situated at Haine, about two miles from Margate, and is provided conjointly by the Margate, Ramsgate, Broadstairs and Isle of Thanet (Rural) Authorities. There is now accommodation for about 93 patients. Patients suffering from Puerperal Fever and Puerperal Pyrexia can now be admitted on the advice of the Medical attendant.

A Small-pox Hospital is situated on a separate site adjoining the above, and is capable of accommodating 16 patients.

The Margate Cottage Hospital, situated in Victoria Road, is entirely supported by voluntary contributions, and has accommodation for about 40 patients. The Hospital is used principally for surgical and accident cases. Children are also admitted, and complicated cases of midwifery.

A scheme is now in operation for the building of a new and much larger Hospital, which is very badly needed to meet the requirements of the town. The new Hospital will have accommodation for about 60 patients, and it is hoped it will be completed next year.

There is no institution in the town for unmarried mothers, but patients requiring a temporary home can sometimes be accommodated at Ramsgate.

**The Joint Hospital Board provides a Motor Ambulance Facilities.** Ambulance for the conveyance of infectious cases to the Isolation Hospital. For non-infectious and accident cases a Motor Ambulance is provided by the Margate Ambulance Corps, a voluntary body which does most useful and creditable work in the town.

**Clinics.** There are two Clinics in the town provided by the Local Authority, viz.:—The School Clinic in Victoria Road, for the treatment of minor ailments in children attending the Elementary Schools, dental treatment, eyesight testing, and for operations for enlarged tonsils and adenoids; and the Maternity and Child Welfare Centre, situated in St. Peter's Footpath, consisting of a Lecture Room, Consulting Room, Kitchen, Weighing Room and Nursery.

The following are particulars of work done at the latter Centre during the year:—

Total attendances of Mothers	...	...	...	4,044
Total attendances of Babies	...	...	...	8,946
Average weekly attendance of Mothers	...	...	...	82
Average weekly attendance of Babies	...	...	...	179
No. of Mothers on the books	...	...	...	246
No. of visits to Babies and Children under five years of age by the Health Visitor	...	...	...	4,240
Average weekly Consultations by the Medical Officer of Health	...	...	...	20
No. of Babies weighed	...	...	...	2,716

**Other Clinics.** There is also a Venereal Clinic and Tuberculosis Dispensary situated in St. Peter's Road, provided by the Kent County Council:—

Hours of attendance:—

*Tuberculosis*—Every Friday at 2 o'clock.

*Venereal Diseases*—Every Wednesday:

Women	4.30	to	5.30.
Men	5.30	to	6.30.

All treatment is free and strictly confidential.

**Health Department Staff.** Contributions under the Public Health Acts and by Exchequer grants are made towards the salaries of the Medical Officer of Health and the Chief Sanitary Inspector. All the Officers on the Staff of the Public Health Department are whole-time officials and consist of the following:

ROWAN McCOMBE,	Medical Officer of Health.
F.R.C.S.I., D.P.H.	School Medical Officer.
	Police Surgeon.
*JOHN RATTRAY, A.R.S.I.	Chief Sanitary Inspector. Inspector under the Sale of Food and Drugs Acts.
	Inspector under the Rats and Mice Destruction Act.
*J. W. BROMLEY, A.R.S.I.	Assistant Sanitary Inspector.
MISS J. DAVIES, Cert.R.S.I., S.R.N.	Assistant Sanitary Inspector.
MISS E. GREEN, C.M.B.	Health Visitor.
L. R. HUTCHINSON	Clerk.
W. EPPS	Disinfecter.

\*Inspectors of meat and other foods.

**Professional Nursing in the Home.** As regards general nursing, this is carried out by a voluntary Association which provides two nurses. These nurses are available for any patient who is recom-

mended by the doctor in attendance. No payment is made to the Association by the Local Authority.

**Nursing Homes (Registration) Act.** At a meeting of the Town Council, held on the 17th April, 1928, it was decided to apply to the Kent County Council under Section 9 (2) of the said Act for the delegation of their powers to this Council. This was agreed to by the County Council at their meeting at Maidstone held on the 16th May, 1928.

The Act, which came into force on the 1st July, 1928, provides for the registration of all Nursing Homes and Maternity Homes within the Borough. Exemptions may, however, be granted to Homes or Institutions not carried on for profit. Certain other premises, as mentioned below, are also exempt from the Act.

The requirements of the said Act were duly advertised in the local Press, and bye-laws have also been drafted and were approved by the Council at their meeting held on the 14th August, 1928, and sanctioned by the Ministry of Health on the 15th October, 1928.

As a result of the above action, twelve applications were received for the registration of Homes. I made personal inspections of all these premises and in every case found the conditions quite satisfactory. I therefore recommended that the applications be granted and certificates of registration forwarded to the various owners.

Under the Act the term "Nursing Home" does not include any Hospital or premises maintained or controlled by a Government Department, Local Authority, or by any other body of persons constituted by special Act of Parliament or incorporated by Royal Charter. This clause, therefore, excluded eight Institutions from the need of registration.

Under Section 6 (1) I received two claims for exemption, both of which were allowed,

**Midwives.** There are four midwives practising in the town, two Municipal and two in private practice. The salaries of the Municipal

Midwives are paid by the Town Council and the fees received from their patients are paid back into the Borough Fund. Taking it all the year round, the Midwives earn the greater part of their salaries. I would like it, therefore, to be specially known that they are very little cost to the ratepayers and the benefit to the poor people is almost incalculable. The Municipal Midwives occupy their spare time in ante-natal visiting.

The Borough Council is not the Local Supervising Authority under the Midwives Act. In my opinion, it would be most advisable for the Council to apply to the Kent County Council for this authority.

**Chemical Work.** The chemical work of the Borough is carried out by our Public Analyst, Mr. Ernest M. Hawkins, F.I.C., of Canterbury.

#### LIST OF BYE-LAWS, REGULATIONS, LOCAL ACTS AND ADOPTIVE ACTS IN FORCE IN THE BOROUGH OF MARGATE.

	Date of Operation or Confirmation.
New Streets and Buildings and Drainage of Existing Buildings (P.H. Act, 1875, s. 157, and P.H.A.A. Act, 1890, s. 23) ... ... ... ...	7th July, 1924.
Nuisance in connection with Removal of Offensive or Noxious Matters (P.H.A.A. Act, 1890, s. 26) ...	11th January, 1900.
Prevention of nuisances arising from snow, filth, rubbish and the keeping of animals (P.H. Act, 1875, s. 44)	17th December, 1900.
Removal of House Refuse (P.H. Act, 1875, s. 44) ... ... ... ...	10th August, 1900.
Slaughter Houses (P.H. Act, 1875, s. 169) ... ... ... ...	6th June, 1901.
Common Lodging Houses (P.H. Act, 1875, s. 80) ... ... ... ...	6th June, 1901.

Management of Mortuary (P.H. Act, 1875, s. 141) ...	... ... ...	12th February, 1898.
Decent Conduct of Persons using Public Conveniences (P.H.A.A. Act, 1890, s. 20)	... ... ...	23rd September, 1899.
Tents, Vans, Sheds, etc. [H.W.C. Act, 1885, s. 9 (2)]	... ... ...	30th January, 1901.
Offensive Trades (P.H. Act, 1875, s. 113)		21st April, 1921.
Regulations for the removal to Hospital of persons brought within the Borough by any ship or boat who are infected with a dangerous infectious disease (P.H. Act, 1875, s. 125) ...		22nd June, 1906.
Provision of means of escape from fire in certain factories and workshops (F. and W. Act, 1901, s. 15) ...	... ...	24th May, 1911.
Margate Extension and Improvement Act, 1877	... ... ...	6th August, 1877.
Margate Corporation Act, 1900	... ...	6th August, 1900.
Margate Corporation Water Act, 1902	...	8th August, 1902.
Margate Corporation Act, 1908	... ...	1st August, 1908.
Infectious Diseases (Prevention) Act, 1890	... ... ...	2nd March, 1891.
Public Health Acts (Amendment) Act, 1890 (Parts II., III., IV., V.)	... ...	2nd March, 1891.
Private Street Works Act, 1892	...	1st July, 1894.
Public Health Acts (Amendment) Act, 1907 (Parts IV., V., VIII., IX., X. and certain sections of Parts II., III. and VII.)	... ... ...	9th October, 1908.
Notification of Births Act, 1907	...	16th November, 1908.
Public Libraries Act, 1919	... ...	15th February, 1923.
Margate Corporation Act, 1926	... ...	4th August, 1926.
Public Health Act, 1925 (Parts II., III., IV., V.)	... ... ...	1st May, 1926.
Houses Let in Lodgings (Housing Act, 1925, s. 6.)	... ... ...	13th April, 1928.
Nursing Homes (Nursing Homes Registration Act, 1927, s. 4)	... ...	15th October, 1928.

## SANITARY CIRCUMSTANCES OF THE AREA.

**Water.** The water supply is obtained from two pumping stations, the property of the Margate Corporation. The pumping stations are situated at Wingham, about 14 miles south-west of Margate and about half-way between Canterbury and Sandwich. The water-shed is composed of a layer of mould overlying the upper chalk.

The works were inaugurated in 1903, and consist of two deep wells with connecting tunnels in the chalk, and the pumping stations built over the wells. The water is pumped through an 18 inch pumping main to a balancing reservoir at Fleete, which has a capacity of 1,000,000 gallons. Twenty outside parishes are also supplied from the same source. The outside area extends to a distance of about ten miles south-east of Canterbury, and in addition Broadstairs takes supplementary water under Agreement, which was renewed in 1923. The aforesaid reservoir takes the surplus water not used en route or in Margate during pumping hours.

An important extension of the pumping plant was completed in 1920, and is capable of delivering 3,500,000 gallons per day, and with slight alterations, 4,750,000 gallons per day.

During 1924-1925 an additional tunnel was driven for a length of 3,150 feet, the total length of the tunnel to date being 6,750 feet, the total dependable quantity of water obtainable from this tunnel during years of average rainfall being about 5,000,000 gallons per day. The total number of gallons pumped during 1928 was about 766,443,000, or a daily average of 2,094,107, while the maximum quantity pumped during one day was 3,375,000, the difference between the average and the maximum quantities being due to the large influx of visitors at the height of the Summer season.

The maximum quantity of water taken by Broadstairs in one day exceeded half-a-million gallons.

Since 1902 the Corporation have expended about £200,000 on works connected with the water supply.

A scheme has been sanctioned by the Ministry of Health for the provision of an additional storage reservoir at Fleete. The reservoir will be constructed of mass concrete, with a capacity of 2,000,000 gallons, at an estimated cost of £20,000. In the immediate future a further large expenditure will be necessary for the purchase of land to ensure that the high standard of purity of the Margate water supply will be maintained. The importance of a pure and sufficient water supply in a health resort cannot be over estimated, and the latest examination of a sample of water taken at the most favourable time of the year for surface percolation was most satisfactory.

During the year 1928, £17,200 was expended in laying a cast-iron pipe line over the water shed for the purpose of carrying the drainage of the Colliery village of Aylesham to new disposal works about a mile and a half to the north of the pumping station, the length being nearly four miles.

At the present time the Water Engineer, Mr. E. A. Borg, is engaged upon the preparation of a report on the water undertaking and which will include additions to pumping machinery and new main from the pumping stations to Margate. The main will be about 21 inches in diameter and about 13 miles in length, and it is estimated that with this additional main that the demands of the next 30 years can be safely coped with. The cost of the new main will be about £100,000. It will thus be seen that the Corporation are looking well ahead.

#### BACTERIOLOGICAL ANALYSIS OF THE MARGATE WATER.

Taken from the Wingham Pumping Station, on the 6th June, 1928:—

The sample of water was, as usually, quite clear and bright; it did not contain any obvious suspended matter, nor was there any sediment after the residue of the water had stood for 24 hours.

##### *Quantitative Bacteriological Analysis:—*

Two cubic centimetres of the water, added to gelatin plates and incubated for 72 hours at a temperature of

22°C., yielded the growth of two organisms only. An equal quantity of the water, added to agar plates and incubated for 24 hours at a temperature of 37°C., also yielded a growth of two organisms only.

*Qualitative Bacteriological Examination:—*

The usual special examination of 60 cubic centimetres of the water for the presence of *B. coli* and other micro-organisms whose presence would indicate recent surface pollution gave completely negative results.

*Conclusions:—*

This sample of the Margate Public Water Supply conforms with the highest possible standard of bacteriological purity. Each of the four cubic centimetres of water examined yielded the growth of only a single micro-organism—so that the supply may, from the bacteriological point of view, be taken, for practical sanitary purposes, as being one of a nearly sterile water.

(Signed) ALEX G. R. FOULERTON,  
F.R.C.S., D.P.H., F.C.S.

**Drainage and  
Sewerage.** The original drainage scheme was carried out in the year 1889. This scheme hardly sufficed until about 1902, when it became apparent that extensions and enlargements were necessary, and since that date large main and intercepting sewers have been laid down with the large developments of the town.

The abolition of the hydraulic system of sewage pumping and the installation of the gas and electrically actuated plant has resulted in a considerable reduction in the annual pumping costs.

The town is drained partly by gravitation and partly by pumping operations, and the sewage is discharged into deep water about 600 yards from the cliffs, at the Eastern extremity of the town, when the tide is racing out to the North Sea. The whole of Margate sewage is pumped at high water of each tide, each pumping period being of about one hour's duration, and it is physically impossible for any sewage to find its way to the

foreshore. The pumping plant at the Foreness outfall works is capable of delivering about 14,000 gallons per minute. At the outfall works the whole of the sewage passes through screens of very small mesh, and the residual screening matter is effectually eliminated by special machinery invented by the Borough Surveyor, Mr. E. A. Borg, so that for all practical purposes the effluent that is discharged into the sea is clear liquid, and in this respect Margate sewer outfall works can be classed as near perfection as possible.

During the year an additional electrically driven pump of capacity of 2,000 gallons per minute has been installed at the King Street Pumping Station, Margate. The total pumping capacity of seven pumps at this Station being 4,750 gallons per minute, or 6,840,000 gallons per day of 24 hours.

**Closet Accommodation.** The water carriage system has been universal in the Borough for many years. The majority of the pans are of the wash-down principle. There are a few cottages

in a remote part of the district which are using pail closets, and in the future it is proposed to lay sewers in this small area, and these closets will be converted into the water carriage system when the drainage is available. Every year considerable lengths of new sewers are laid down, owing to the growth of the town.

**House Refuse Disposal.** In some parts of the town the collection is made daily, and in other parts twice weekly and three times weekly. This work is carried out by means of horse-drawn vehicles and specially designed petrol-drawn dust vans.

The Corporation Refuse Destructor, which was erected in 1912, is situate well away from the town and, consequently, there is no cause of complaint. Upon arrival at the Destructor all tins are sorted out and pressed in a power driven bailing press, ready for transport to smelting works. The refuse is then delivered to top fed furnaces and thoroughly burnt to clinker, which is used in various ways, such as in the manufacture of tar macadam, paving slabs, curb stones, disinfectant powder, etc. Electrical power is generated for lighting the

Destructor buildings and driving machinery, and steam for driving the necessary engines and plant, and as far as the house refuse disposal goes, Margate stands pre-eminent.

At the Refuse Destructor an up-to-date mechanical workshop has been developed, and includes dynamos, lathes, drilling machines, etc.

**Baths.** The Public Baths, situate in Victoria Road, were opened on the 13th March, 1928. The accommodation consists of 24 slipper baths for men and 23 for women. The baths are open daily, Monday to Friday from 2 p.m. to 9 p.m., Saturdays 8 a.m. to 9 p.m., and Sundays 8 a.m. to 1 p.m. The inclusive charge for a bath and towel is sixpence, and special facilities are given to school children on Saturday mornings to obtain a bath at half price, the children providing their own towels.

These Public Baths have been of great service during the summer, especially to seasonal workers and visitors where the number of baths in private houses is inadequate, but the demand for baths during the autumn and winter months has not been up to the estimated amount. It is to be hoped that in the future the general public will avail themselves of these privileges to a greater extent.

The number of persons who have used the baths from the 13th March, 1928, are:—

Women	Adults	...	10,532	
	Children	...	1,304	11,836
Men	Adults	...	13,045	
	Children	...	1,025	14,070
				—
		Total	25,906	—

Particular mention might be made of the Hydro, which has lately been opened with a complete installation of modern Turkish, Russian and Hydro Electric Baths, which gives practically every form of bath or electrical treatment hitherto

only obtainable at the recognized spas. All operators are fully qualified and carry out efficiently all prescriptions of the patients' medical adviser. No resident doctor is kept, but the establishment is at the disposal of any member of the medical profession.

An establishment of this nature will, I am sure, be a great attraction to visitors and add to the prosperity of the town.

**Housing.** The Corporation have erected 356 houses since 1920. This number includes 80

houses on the Connaught Estate, 56 on the Addiscombe Estate, 70 on the Garlinge Estate, and 150 on the Dane Valley Estate. The remaining 43 houses on the Dane Valley Estate were occupied during the year.

The erection of these houses has alleviated the housing problem to a certain extent, but there are still a number of applicants for Corporation houses, *e.g.*, families living in sub-let rooms.

It has been noticed that, when families living in sub-let rooms have moved into new houses, the rooms have been immediately occupied by other families, often those who have come lately into the town, and who then become applicants for Corporation houses. Many of these applicants, owing to the casual nature of their employment in the town, are unable to pay more than an inclusive rent of 12s. 6d. per week unless they resort to letting lodgings to visitors during the summer months, which results in overcrowding.

The majority of the houses built by private enterprise during the year were of the villa type, and unsuitable for the working classes owing to the higher rents charged for them.

#### SANITARY INSPECTION OF THE DISTRICT.

The information contained in this part of the Report has been prepared by the Chief Sanitary Inspector.

##### *No. of Inspections carried out during the Year:*

No. of Dwelling Houses under Public Health Acts ...	3,726
No. of Dwelling Houses under Housing Acts ...	147
No. of Houses Inspected re Infectious Diseases ...	920
Houses Let in Lodgings ... ... ... ...	111

Factories, Workshops and Workplaces	...	...	...	348
Bakehouses	...	...	...	70
Cowsheds	...	...	...	53
Dairies and Milkshops	...	...	...	95
Slaughter Houses	...	...	...	2,009
Offensive Trades	...	...	...	85
Ice Cream Premises	...	...	...	142
Stables	...	...	...	392
Premises where Animals were kept	...	...	...	43
Premises with regard to Rats	...	...	...	250
Schools	...	...	...	305
Courts, Back Roads, etc.	...	...	...	603
Shops and Food Stores	...	...	...	454
Restaurant Kitchens	...	...	...	112
Places of Entertainment	...	...	...	17
Other Inspections	...	...	...	1,301
Total Inspections	...	...	...	11,183
Total Re-Inspections	...	...	...	3,175

## NOTICES SERVED.

No. of complaints received and investigated	...	...	254
No. of Notices and Letters sent with respect to matters requiring attention under the Public Health Acts, etc.	...	...	569
No. of Statutory Notices served	...	...	69

## DESCRIPTION OF WORK CARRIED OUT.

*Houses.*

Improved	...	...	...	...	...	30
Cleansed and limewashed	...	...	...	...	...	40
Bedding cleansed	...	...	...	...	...	14
Yards cleansed	...	...	...	...	...	41
Vermin eradicated	...	...	..	...	...	31
Overcrowding abated	...	...	...	...	...	16
Rooms illegally used for sleeping purposes abolished						19
New floors laid or repaired	...	..	...	...	...	28
Plaster on walls or ceilings repaired	...	...	...	...	...	29
Roofs repaired	...	...	...	...	...	39
Sash frames repaired and cords renewed	...	...	...	...	...	40
Kitchen ranges or coppers repaired or renewed	...	...	...	...	...	21

Rain-water pipes or gutters repaired or renewed ...	47
New sinks fixed ... ... ... ...	14
Waste pipes trapped or renewed .. ... ...	27
Yards paved with cement concrete ... ... ...	15
Yard paving repaired or renewed ... ... ...	26
Accumulations of rubbish removed ... ... ...	42
Nuisance abated from keeping of animals ... ...	18
Water services renewed ... ... ...	11

*Dustbins.*

No. provided on service of preliminary notices ...	110
No. provided on service of statutory notices ...	10

*Drainage.*

No of smoke tests applied to drains ... ...	32
No. of water tests applied to new drains ... ...	7
No. of houses completely re-drained ... ...	9
No. of houses where drainage was partly reconstructed ... ... ... ...	12
No. of houses where defective drains were repaired	21
New inspection chambers built .. ... ...	22
New gullies fixed ... ... ... ...	34
Defective soil and vent pipes repaired or renewed	35
Drains unstopped and cleansed ... ... ...	53
Cesspools abolished ... ... ... ...	3
Urinals cleansed and limewashed ... ... ...	11
Offensive and insanitary urinals reconstructed ...	10

*Water Closets.*

Reconstructed ... ... ... ...	6
Repaired ... ... ... ...	27
New water closets erected ... ... ...	12
Washdown W.C. pans provided ... ... ...	61
New cisterns fixed ... ... ...	38
Cisterns repaired and put in order ... ...	26
Flush pipes fixed or renewed ... ...	34
W.C.'s cleansed and limewashed ... ...	39

*Houses Let in Lodgings.*

Cleansed and limewashed ... ... ...	10
Sanitary defects remedied ... ... ...	15
Overcrowding abated ... ... ...	6

*Bakehouses.*

Cleansed and limewashed	...	...	...	...	...	6
Improved	...	...	...	...	...	2
Ventilated	...	...	...	...	...	2
Reconstructed	...	...	...	...	...	1
Miscellaneous	...	...	...	...	...	4

*Factories, Workshops and Workplaces.*

Cleansed and limewashed	...	...	...	...	...	4
W.C.'s cleansed and limewashed	..	...	...	...	...	13
Ventilation provided	...	...	...	...	...	4
Sanitary accommodation provided	...	...	...	...	...	2
Miscellaneous	...	...	...	...	...	3

*Restaurants.*

Kitchens cleansed and limewashed	...	...	...	...	...	8
Improved	...	...	...	...	...	6

*Shops and other Food Stores.*

Cleansed and limewashed	...	...	...	...	...	26
Insanitary premises abolished	...	...	...	...	...	1
Improved	...	...	...	...	...	11
Miscellaneous	...	...	...	..	...	14

*Ice Cream Premises.*

Cleansed and limewashed	...	...	...	...	...	4
Improved	...	...	...	...	...	2
Floors drained	...	...	...	...	...	1

*Offensive Trades.*

FISH FRIERS	—Cleansed and limewashed	...	...	...	...	4
	Premises improved	...	...	...	...	1
	Bins provided	...	...	...	...	8
MARINE STORES	—Accumulations removed	...	...	...	...	3
	Cleansed and limewashed	...	...	...	...	1
	Bins provided	...	...	...	...	4

*Cowsheds.*

Cleansed and limewashed	...	...	...	...	...	24
Improved	...	...	...	...	...	1

*Dairies and Milkshops.*

Provided with proper milk receptacles	...	...	...	1
Defects remedied under Milk and Dairies' Order	...			9
Cleansed and limewashed	...	...	...	2

*Stables.*

Cleansed and limewashed	...	...	...	13
Manure pits provided	...	...	...	3
Accumulations of manure removed	...	...	...	20
Yards re-paved	...	...	...	6

*Slaughter Houses.*

Cleansed and limewashed	...	...	...	56
Repaired	...	...	...	4
Receptacles provided	...	...	...	17

*Rats Act.*

Premises treated	...	...	...	...	55
Lands treated	...	...	...	...	30

<i>Miscellaneous</i>	...	...	...	...	...	20
Smoke nuisances abated	...	...	...	...	...	3

## DISINFECTION.

No. of infected houses disinfected	...	...	...	219
No. of infected rooms disinfected	...	...	...	289
No. of houses disinfected after consumption	..			18
No. of rooms disinfected after consumption	.			34

## No. of articles disinfected :—

33 Beds	482 Blankets
276 Mattresses	24 Rugs
178 Sheets	18 Cushions
454 Pillows	128 Miscellaneous
110 Bolsters	

Making a total of 1,703.

## INSPECTION OF MEAT AND OTHER FOODS.

The following table shows the amount of unsound Food dealt with during the year:—

DESCRIPTION.	DISEASE.	WEIGHT IN LBS.
<b>Unsound Meat.</b>		
2 Beasts' Carcasses and Offal ... ...	Tuberculosis ... ...	1,402
3 Beasts' Forequarters	„ „ „	420
1 „ Hindquarter	„ „ „	112
5 Beasts' Heads, Tongues and Lungs	„ „ „	316
1 Beast's Head and Tongue ..	Actinomycosis ...	32
1 Beast's Lungs ...	Pyaemia ...	11
27 Beasts' Livers ..	Flukes ...	484
5 „ „ ...	Pyaemia ...	84½
2 Pigs' Carcasses ...	Inflammation ...	188
3 „ Carcasses ...	Tuberculosis ...	352
1 Pig's Carcase	Dropsical ...	70
5 Pigs' Heads and Plucks ... ..	Tuberculosis ...	79½
5 Pigs' Livers ...	Cirrhosis ...	27
3 „ „ ...	Necrosis ...	27
2 „ „ ...	Inflammation ...	16½
8 Sheep's Livers ..	Flukes ...	44½
Beef (English) ..	Bruised ...	94
„ (Chilled) .	Unsound ...	572½
Liver (Chilled) ..	Flukes ...	5
Lamb (English) ...	Bruised ...	16
<b>Unsound Fish.</b>		
Codlings ... ...	Unsound ... ...	112
Mackerel ... ...	„ „ „	50
Whiting ... ...	„ „ „	28
9 Tins of Prawns ...	„ „ „	72
<b>Miscellaneous.</b>		
4 Turkeys ... ..	Unsound ... ...	45
Total Weight		4,660½ lbs.
Total weight of food destroyed--2 tons 1 cwt. 2 qrs. 12½ lbs.		

## SALE OF FOOD AND DRUGS ACT.

During the year 120 samples of various Foods and Drugs were obtained and submitted to your Public Analyst, Mr. E. M. Hawkins, at Canterbury.

## Description and number of samples:—

Nature of Sample.	Adulterated.	Genuine.	Informal.	Formal.	Total.
Apples ...	—	2	—	2	2
Arrowroot ..	—	1	1	—	1
Beer ...	—	1	1	—	1
Bread ...	—	1	1	—	1
Brawn ...	—	1	—	1	1
Butter ..	—	3	1	2	3
Camphorated Oil ...	—	1	1	—	1
Candied Peel ...	—	1	1	—	1
Collard Head ...	—	1	—	1	1
Coffee ...	—	1	1	—	1
Cream ...	—	5	—	5	5
Cream of Tartar ..	—	2	2	—	2
Dried Fruit ...	—	1	1	—	1
Dripping ...	—	1	—	1	1
Flour ...	—	2	1	1	2
Flour (self-raising)...	—	1	—	1	1
Ginger Beer ...	—	1	1	—	1
Glycerine .	—	1	1	—	1
Ground Ginger ..	—	2	1	1	2
Honey ...	—	1	1	—	1
Jam ...	—	1	1	—	1
Lard ...	—	2	—	2	2
Lemonade ..	—	1	1	—	1
Lemon Cheese ..	—	1	1	—	1
Margarine ...	—	3	—	3	3
Marmalade ...	—	1	1	—	1
Medicine ...	—	3	—	3	3
Milk ...	10	43	—	53	53
Milk (condensed) ..	—	1	1	—	1
Oatmeal ...	—	1	1	—	1
Olive Oil ...	—	1	1	—	1
Raisins ...	—	1	1	—	1
Rice ...	—	1	1	—	1
Sago ...	—	1	1	—	1
Sausage ...	1	2	—	3	3
Sausage (Breakfast)	—	1	—	1	1
Sausage Meat ...	2	—	—	2	2
Shredded Suet ...	—	1	1	—	1
Shrimp Paste ...	—	1	1	—	1
Sugar ...	—	1	—	1	1
Paregoric...	—	1	1	—	1
Spirits of Nitre ..	—	1	1	—	1
Sponge Cakes ...	—	2	—	2	2
Tomatoes (Canned)	—	1	1	—	1
Whisky ...	1	3	3	1	4
Wine (Non-Alcoholic)	1	—	1	—	4
Totals ...	15	105	34	86	120

It will be seen from the above statement that 105 samples were reported to be genuine and 15 adulterated, which gives a percentage of 12.5 of adulteration.

## COWSHEDS, DAIRIES AND MILKSHOPS.

No. of Registered Farms and Cowsheds in the Borough	9
No. of Registered Dairy Premises ... ... ...	35
No. of Registered Wholesale Purveyors ... ... ...	11
No. of Registered Retail Purveyors ... ... ...	84
No. of Registered Purveyors outside the Borough ...	4

The composition of the samples of Milk are given in the following table:—

NO. OF SAMPLE	PERCENTAGE RESULTS.		PURCHASED DURING THE MONTH OF :
	MILK FAT.	NON-FATTY SOLIDS.	
7	2.99	8.79	JANUARY.
8	3.38	9.03	Average.
9	4.12	8.80	Milk Fat      Non-Fatty Solids
10	2.84	9.19	3.33            8.95
17	3.72	8.82	FEBRUARY.
18	3.38	9.00	Average
19	3.70	8.81	Milk Fat      Non-Fatty Solids
20	3.40	8.88	3.55            8.88
27	3.12	8.91	MARCH.
28	2.72	7.95	Average
29	2.58	9.05	Milk Fat      Non-Fatty Solids
30	3.16	8.73	2.91            8.54
31	2.95	8.08	
32	3.28	8.68	APRIL.
33	3.32	8.95	Average
34	3.30	8.94	Milk Fat      Non-Fatty Solids
35	4.72	8.73	3.65            8.82
45	3.10	8.87	
46	3.30	8.93	
47	2.94	8.68	MAY.
48	2.82	8.77	Average
52	3.68	8.88	Milk Fat      Non-Fatty Solids
53	2.82	8.84	3.07            8.83
54	2.86	8.87	
58	2.92	8.86	JUNE.
59	3.35	8.80	Average
60	3.42	8.87	Milk Fat      Non-Fatty Solids
61	3.33	8.77	3.18            8.83
62	2.90	8.83	
67	3.12	8.71	
68	3.00	8.94	
69	3.10	8.83	AUGUST.
70	3.35	8.66	Average
77	3.45	8.65	Milk Fat      Non-Fatty Solids
78	3.02	8.79	3.19            8.73
79	3.30	8.80	
80	3.20	8.45	
87	2.92	8.79	SEPTEMBER.
88	3.35	8.87	Average
89	3.50	8.52	Milk Fat      Non-Fatty Solids
90	3.15	8.72	3.23            8.72
97	2.75	8.90	
98	3.30	8.94	
99	3.45	8.89	NOVEMBER.
100	4.16	9.26	Average
101	3.02	8.41	Milk Fat      Non-Fatty Solids
102	3.17	8.77	3.81            8.92
103	3.72	9.05	
104	3.70	9.12	
116	4.05	8.97	DECEMBER,
117	3.30	8.99	Average
118	3.45	9.11	Milk Fat      Non-Fatty Solids
119	2.66	9.00	3.36            9.02
Yearly Average.	3.27	8.82	

ADMINISTRATIVE ACTION REGARDING SAMPLES  
REPORTED NOT TO BE GENUINE.

No. of Sample.	Nature of Samples.	Results of Analyses.	Remarks.
10	Milk ...	Deficient in Fat 5% ...	Vendor interviewed by Health Committee
28	Milk ..	Added Water 6% ...	Sample No. 31 taken in course of delivery at request of Vendor
29	Milk ...	Deficient in Fat 14% ...	Proceedings taken, Vendor fined £5
31	Milk ...	Added Water 5% ...	Proceedings taken, Wholesaler fined £2 and £5 18s. costs
47	Milk ...	Deficient in Fat 2% ...	No action taken
48	Milk ...	Deficient in Fat 6% ...	Samples Nos. 53 and 54 taken in course of delivery
49	Sausage Meat ...	Sulphur di-oxide not declared ...	Vendor verbally warned
50	Sausage Meat ..	Sulphur di-oxide not declared ...	Vendor verbally warned
53 } 54 }	Milk ... Milk ...	Deficient in Fat 6% Deficient in Fat 5% ...	Letter of warning sent by Town Clerk
74	Whisky ...	Added Water 14% ...	Formal sample taken which proved to be genuine
96	Sausages ...	Sulphur di-oxide not declared ...	Letter of warning sent by Town Clerk.
97	Milk ...	Deficient in Fat 8% ...	Vendor interviewed by Health Committee
113	Raisin Wine ...	Sulphur di-oxide not declared ...	Vendor verbally warned
119	Milk ..	Deficient in Fat 11% ...	Vendor interviewed by Health Committee

LEGAL PROCEEDINGS.

During the year proceedings were taken in two cases under the Food and Drugs Act, one under the Public Health Act, one under the Housing Act, and one under the Bye-Laws.

The results of the proceedings were as follows:—

Cases against the Vendor of a sample of Milk (No. 29) found to be deficient in fat to the extent of 14 %. Vendor fined £5.

Case against the Wholesaler of a sample of Milk (No. 31) found to contain 5 % of added water. Wholesaler fined £2 and £5 18s. 0d. costs.

Proceedings were taken under the Public Health Act, 1875, for failure to abate a nuisance of keeping rabbits in such a state as to be a nuisance or injurious to health.

The case was dismissed, but an order of the Court was granted for entry on to the premises to ascertain that the nuisance had been abated.

Proceedings were taken on three summonses against the Owner of a house let in lodgings for non-compliance with the Bye-Laws relating to same. The Justices in this case made an Order for the work to be executed within one month, which Order was duly complied with.

Proceedings were also taken against the same Owner under Section 5 of the Housing Act, 1925, for not having the rent books properly inscribed, and as a result the Justices inflicted a fine of 10s.

**TABLE I.**  
**Inspection of Factories, Workshops and Workplaces.**

Premises.	Inspections.	Written Notices.	Prosecutions.
<b>FACTORIES</b> (Including Factory Laundries) ...	100	3	—
<b>WORKSHOPS</b> (Including Workshop Laundries)	226	5	—
<b>WORKPLACES</b> (Other than Outworkers' premises included in Part 3 of this Report)	22	8	—
Total ...	348	16	—

**TABLE II.**  
**Defects found in Factories, Workshops and Workplaces.**

Particulars.	Number of Defects.			No. of Offences in respect to which Prosecutions were instituted.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts:</i>				
Want of Cleanliness ... ...	27	25	—	—
Want of Ventilation ... ...	6	6	—	—
Overcrowding ... ...	—	—	—	—
Want of drainage of floors ...	1	1	—	—
Other Nuisances ... ...	23	20	—	—
<i>Sanitary Accommodation:</i>				
Insufficient ... ... ..	1	2	—	—
Unsuitable or defective ..	3	3	—	—
Not separate for sexes ...	—	—	—	—
<i>Offences under the Factory and Workshops Acts:</i>				
Illegal occupation of underground bakehouses ... ... ..	—	—	—	—
Other offences ... ... ..	—	—	—	—
Total ... ...	61	57	—	—

### Registered Workshops.

Workshops on the Register at the end of the year.	Number
Bakers ... ... ..	8
Blacksmiths ... ... ..	7
Beer Bottlers ... ... ..	1
Blindmakers ... ... ..	2
Boatbuilders ... ... ..	1
Bootmakers ... ... ..	28
Builders ... ... ..	24
Cabinet Makers ... ... ..	4
Chocolate Manufacturers ... ... ..	1
Coach Builders ... ... ..	1
Cycle Repairers ... ... ..	7
Dressmakers ... ... ..	15
Electrical Engineers ... ... ..	4
Electro Platers ... ... ..	1
Harness Maker ... ... ..	1
Ironmongers ... ... ..	4
Knitting ... ... ..	2
Laundries ... ... ..	9
Musical Instrument Repairers ... ... ..	2
Milliners ... ... ..	4
Motor Engineers and Garages ... ... ..	35
Opticians ... ... ..	2
Picture Framers ... ... ..	3
Photographers ... ... ..	9
Plumbers and Decorators ... ... ..	7
Sheet Metal Worker ... ... ..	1
Sign Writers ... ... ..	4
Tailors ... ... ..	18
Upholsterers ... ... ..	11
Watchmakers ... ... ..	11
	227

**TABLE "A."**

Amount of Shipping entering the Port Sanitary District during the year 1928.

	No.	Tonnage.	No. Inspected.		No. reported to be defective.	No. of Orders issued.
			By the Medical Officer of Health.	By the Sanitary Inspector.		
Foreign :						
Steamers	...	—	—	—	—	—
Motor*	..	12	1797	1	2	—
Sailing	...	6	475	1	—	—
Fishing	...	—	—	—	—	—
Total Foreign	..	18	2272	2	2	—
Coastwise :						
Steamers	...	61	9709	4	16	—
Motor*	...	47	3622	2	5	—
Sailing	...	150	11047	—	25	—
Fishing	..	2	27	—	—	—
Total Coastwise	..	260	24405	6	46	—
Total Foreign and Coastwise	...	278	26677	8	48	—

\* Includes mechanically propelled vessels other than steamers.

**TABLE "B."**

Passenger trade during 1928     ...     ...     ...     Nil.

**TABLE "C."**

Cases of infectious sickness landed from vessels     ...     Nil.

**TABLE "D."**

Cases of infectious sickness occurring on vessels during the voyage, but disposed of prior to arrival     ...     Nil.

**TABLE "E."**

Rats destroyed during 1928     ...     ...     ...     Nil.

The vessels entering the Harbour consist of barges or small steamers, which carry cargo, chiefly of coal, granite and building

materials. There is no food with the exception of potatoes brought into the Port. The vessels remain in the Harbour for only a short period, and in some cases leave the day after arrival. It was not necessary to serve any notices during the year. All the ships inspected were found to be maintained in a clean and satisfactory state.

**Smoke Abatement.** There are seven chimney shafts in the town, and in three cases it was necessary to give warnings with regard to the emission of smoke.

## PREMISES AND OCCUPATIONS WHICH CAN BE CONTROLLED BY BYE-LAWS AND REGULATIONS.

**Houses Let in Lodgings.** There are ten Houses Let in Lodgings on the register. These are regularly inspected and in one case it was necessary to take legal proceedings against the owner for failing to carry out necessary sanitary work.

**Offensive Trades.** There are ten Fish Friers and one Marine Store Dealer in the town.

The above premises have been constantly inspected and found to be in a satisfactory condition.

**Tents, Vans and Sheds.** There are no permanent van or shed dwellings within the district. Small Boy Scout Camps are held during the Summer in the outlying parts of the district and these have been maintained generally in a satisfactory condition. There is a growing practice of families camping out with a car for a few days, no provision being made with regard to sanitary accommodation. Difficulty is experienced in dealing with this matter as, owing to the shortness of the stay, the people have moved elsewhere before action can be taken.

**Underground Sleeping Rooms.** A considerable number of underground rooms are used for sleeping purposes but only during the summer months.

## OTHER SANITARY CONDITIONS REQUIRING NOTICE.

**Rats and Mice** The Chief Sanitary Inspector is responsible for the administration of this Act. **Destruction Act, 1919.** During the year 250 inspections were carried out and advice and assistance were given as to the best methods of destroying rats; approved poisons and baits were supplied by the Department at cost price.

Special efforts were made during the National Rat Week for concerted action to be taken for the destruction of rats, and all Corporation property was treated, with the result that a large number of rats were destroyed.

The Sub-Committee appointed to consider **Storage and Removal of Refuse.** the removal of house refuse have decided to purchase four Shelvoke and Drewry motor freighters to expedite the collection of refuse; and that where practicable refuse should be collected from the back gardens of premises to obviate as far as possible the eyesore of unsightly bins being deposited on the front pavements when the streets are filled with visitors. A special collection is made daily from hotels and other premises where a large amount of refuse is produced, and a daily collection is carried out in the main streets during the summer months. The refuse is collected from other roads three times weekly.

The Department experiences great difficulty in inducing householders to provide proper sanitary dustbins or to keep these in a sanitary condition, and a large amount of the Inspectors' time is occupied in trying to improve the general standard of cleanliness in these matters.

The places of entertainment are periodically **Sanitary Condition of Theatres, Cinemas, etc.** inspected, and in some cases it has been necessary to draw attention to various minor defects, and these have been at once rectified. One cinema was found to be without adequate sanitary accommodation, and a new lavatory is in course of construction. Generally speaking, these places have been maintained in a satisfactory condition.

**Mortuary.** In several previous reports it has been necessary to draw attention to the unsatisfactory condition of the Mortuary in King Street, which is quite unsuitable for the requirements of the town. The Council have now decided, subject to the consent of the Ministry of Health, which has not yet been given, to erect a new Mortuary in a more suitable position in Dane Road, and a very necessary improvement will thus be effected. The plans are now awaiting the approval of the Ministry.

During the year 16 bodies were placed in the Mortuary.

**Slaughter-Houses.** There are 14 Slaughter-Houses within the district, 7 are registered and 7 licensed. They are regularly inspected by the Sanitary Inspectors while killing is in progress. Some of the premises leave much to be desired owing to their obsolete construction and close proximity to dwelling houses. The Health Committee inspected some of these slaughter-houses and were of the opinion that the provision of a public abattoir was the only alternative in the event of their abolition.

The question of the provision of a public abattoir was considered by the Council, who deferred the matter for a year. The Health Committee are also considering the adoption of the Model Bye-Laws relating to slaughter-houses and humane slaughtering.

**Rag Flock Act, 1911 and 1928.** There are no bedding factories within the district. There are, however, several upholsterers who are in a small way of business and occasionally re-make mattresses. These premises are inspected, but no samples of rag flock have been obtained during the year.

**Schools.** The Sanitary Inspectress visits each School every week and reports to me any nuisance, uncleanliness, or defect in the sanitary conditions. Sufficient lavatory basins and towels are provided at all the Schools, with a copious supply of water for washing and drinking purposes. Children suffering from an infectious disease are notified to me by the Head Teacher or School Attendance Officer. They are excluded from School for the prescribed period (cf. Memorandum on Closure of, and Exclusion from School, 1925); contacts are also excluded.

## HOUSING STATISTICS FOR THE YEAR 1928.

Number of houses erected during the year:—

(a) Total, including Nos. given separately under (b)	142
(b) With State assistance under the Housing Acts	
(1) By the Local Authority ... ... ...	---
(2) By other bodies or persons .. ... ..	---

1. Unfit dwelling houses.

Inspection—

(1) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts) ... ... ... ...	457
(2) Number of dwelling houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 ... ...	70
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation ...	3
(4) Number of dwelling houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation ...	31

2. Remedy of defects without Service of formal Notices.

Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their officers ... ... ... ...	26
---	----

3. Action under Statutory Powers.

A. Proceedings under Section 3 of the Housing Act, 1925.

(1) Number of dwelling houses in respect of which notices were served requiring repairs	7
---	---

(2) Number of dwelling houses which were rendered fit after service of formal notices:						
(a) By owners ... ... ... ...						7
(b) By Local Authority in default of owners ... ... ... ...						—

(3) Number of dwelling houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close ... ... ... ...						
						—

B. Proceedings under Public Health Acts.

(1) Number of dwelling houses in respect of which notices were served requiring defects to be remedied ... ... ... ...						22
(2) Number of dwelling houses in which defects were remedied after service of formal notices:						
(a) By owners ... ... ... ...						20
(b) By Local Authority in default of owners ... ... ... ...						—

C. Proceedings under Sections 11, 14 and 15 of the Housing Act, 1925:—

(1) Number of representations made with a view to the making of Closing Orders ...					3
(2) Number of dwelling houses in respect of which Closing Orders were made... ...					3
(3) Number of dwelling houses in respect of which Closing Orders were determined, the dwelling houses having been rendered fit					—
(4) Number of dwelling houses in respect of which Demolition Orders were made ...					2
(5) Number of dwelling houses demolished in pursuance of Demolition Orders ... ...					8
Number of houses demolished without Demolition Orders ... ... ...					2

## INSPECTION AND SUPERVISION OF FOOD.

**Milk Supply.** There are nine farms and cowsheds in the Borough, one farm having been discontinued during the year. These, with one exception, have been kept in a satisfactory condition. The milk supply is chiefly derived from farms outside the district, and is brought into the town by road or rail. One farmer outside the district was removed from the register owing to the unsatisfactory way in which the milk was handled on his premises. Periodical samples of milk are obtained for bacteriological examination when milk is delivered at the dairies. The dairies are periodically inspected and several improvements have been carried out to bring the premises up to date.

**Designated Milk.** During the year the following licences for the sale of milk under the Milk (Special Designations) Order, 1923, were granted, viz.: Six "Certified," four "Grade A (Tuberculin Tested)," and two "Pasteurized."

There were no refusals or revocations of licences during the year.

Ten samples of Milk were obtained under the Milk (Special Designations) Order, 1923, as under:—

Designation.	Date sample taken.	Bacteria per c.cm.
Certified	14/3/28	2,360
Grade "A" (T.T.)	22/3/28	1,250
Certified	26/6/28	1,330
,	31/7/28	1.530
,	31/7/28	810
,	15/8/28	4,100
,	15/8/28	2,220
,	18/9/28	310
,	16/10/28	2,200
,	16/10/28	200

**Meat.** The Chief and one Assistant Inspector are both qualified Meat Inspectors. Two thousand and nine inspections of slaughter-

houses have been carried out during slaughtering, which has resulted in 1 ton 18 cwt. 3 qrs. 13½ lbs. of diseased meat being destroyed.

General shops and provision stores have been inspected and where necessary an improvement has been effected with regard to general cleanliness.

Hotels and restaurants have been kept under supervision, and all premises where ice cream is made have been periodically inspected.

**Sale of Food and Drugs Acts.** Particulars of samples obtained and action taken with regard to Food and Drugs will be found incorporated in the Sanitary Inspector's section of the Report.

#### PREVALENCE OF, AND CONTROL OVER, INFECTIOUS DISEASES.

Pathological and bacteriological examination of specimens are undertaken by the Kent County Council. This is very largely used by the practitioners of the town, as the following table testifies:—

Nature of Examination.	Results.		
	Positive.	Negative.	Total.
Examination of Diphtheria Swabs...	26	383	409
Widal reaction in cases of suspected Typhoid Fever ... ... ...	2	3	5
Sputum examination for Tubercl Bacilli ... ... ...	21	61	82
Examination of hairs for "Ring worm" parasite ... ... ...	—	5	5
<hr/>			
Totals ... ...	49	452	501

In addition to the above, 8 samples of Ice Cream and 5 samples of Milk were examined at the Kent County Council Laboratory.

It will be noted that during 1928, 409 swabs were taken in respect of diphtheria, so that evidently a pretty good search was made to detect and isolate "carriers."

Return cases are very infrequent, as no patient is allowed out of Hospital until two negative swabs (taken at a week's interval) are obtained. Children attending the Elementary Schools are examined before returning to school.

So far no use has been made of the tests known as Schick and Dick tests for Diphtheria and Scarlet Fever respectively.

We have had no cases of Malaria, Dysentery, or Trench Fever.

**Scarlet Fever.** We had quite an unusual amount of Scarlet Fever during the Autumn. The disease was of a very mild type and confined principally to two Schools at different parts of the town. The mildness of the attack and the fact that the children were not really ill made it very difficult to control the spread of the disease. Altogether we had 48 children of school age sent to the Isolation Hospital with this complaint. It was not considered advisable to close any of the Schools.

Contacts are excluded from School and the premises are disinfected in every case. In the case of Diphtheria, anti-toxin is administered to all contacts where it is considered necessary. This is provided free of cost in necessitous cases, and anti-toxin is administered to every patient immediately upon entering the Hospital.

Altogether there were 119 cases of Scarlet Fever notified and 35 cases of Diphtheria. It is interesting to note that 21 cases of Diphtheria occurred in Institutions in the town and 34 cases of Scarlet Fever.

**Enteric Fever.** Only one case of Enteric Fever was notified.

We have had no cases of Small Pox in the area, and no primary or re-vaccinations have been made by the Medical Officer

of Health under the Public Health (Small Pox Prevention) Regulations, 1917.

Non-notifiable infectious diseases, such as Measles, Whooping Cough, etc., are notified to me by the parents and School Teachers. These cases are visited, as far as time will permit, by the Sanitary Inspectress or myself, and if a doctor is not in attendance, advice is given as to the care of the patient, isolation, etc. Contacts are excluded from School according to the regulations prescribed by the Board of Education.

There were no cases of locally contracted Anthrax or Rabies.

A Cleansing Station is situated in the Town Yard, adjoining the Disinfecting Station, and is available for the disinfecting and cleansing of verminous persons and their belongings.

I should like to thank the Chief Sanitary Inspector, Mr. J. Rattray, and the Clerk, Mr. L. Hutchinson, for their help in preparing this Report.

### Notifiable Diseases during the Year 1928.

DISEASE	Total cases notified *	Cases admitted to Hospital.	Total Deaths.*
Small Pox ... ...	—	—	—
Scarlet Fever ... ...	119	107	2
Diphtheria ... ...	35	33	1
Enteric Fever (including Paratyphoid) ...	1	1	—
Puerperal Fever ... ...	—	—	—
Puerperal Pyrexia ...	2	—	—
Pneumonia ... ... ...	21	—	8
Other diseases generally notified :—			
Erysipelas ... ... ..	8	—	—
Encephalitis Lethargica...	1	—	2
Tuberculosis :—			
Pulmonary... ... ..	27	—	21
Non-pulmonary ... ..	13	—	2
Other diseases notifiable locally :—			
Nil	—	—	—

\* For analysis under age groups see separate tables.

### Ophthalmia Neonatorum.

Ophthalmia Neonatorum.	CASES.			Vision Unimpaired.	Vision Impaired.	Total Blindness.	Deaths.				
	Notified.	Treated.									
		At Home.	In Hospital.								
	1	—	1	1	—	—	—				

## TUBERCULOSIS.

Age Period.	New Cases.				Deaths.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M	F	M	F	M	F	M	F
Under 1 year ...	—	—	—	—	—	—	—	—
1 ... ...	—	—	2	1	—	—	—	—
5 ... ...	1	—	2	3	—	—	—	—
10 ... ...	—	—	—	1	—	—	—	—
15 .. ...	—	—	—	—	—	—	1	—
20 ... ...	3	1	1	—	2	1	—	—
25 ... ...	4	4	—	—	2	2	1	—
35 ... ...	5	4	—	—	1	1	—	1
45 ... ...	2	1	—	2	5	1	—	—
55 ... ...	2	—	—	1	2	1	—	—
65 and upwards	—	—	—	—	2	—	—	—
Totals	17	10	5	8	14	7	1	1

Of the total 23 deaths from Tuberculosis 6 cases were not notified.

## Deaths from Infectious Diseases occurring during 1928.

Under 1 year	1 and under 2	2 and under 5	3 and under 4	4 and under 5	5 and under 10	10 and under 15	15 and under 20	20 and under 35	25 and under 45	45 and under 65	65 and over
Small Pox	...	...	—	—	—	—	—	—	—	—	—
Scarlet Fever	...	...	—	—	—	—	—	—	—	—	—
Diphtheria	...	...	—	—	—	—	—	—	—	—	—
Enteric Fever (including Paratyphoid)	..	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	..	—	—	—	—	—	—	—	—	—	—
Puerperal Pyrexia	...	—	—	—	—	—	—	—	—	—	—
Pneumonia	...	..	—	—	—	—	—	—	—	—	—
Erysipelas	...	..	—	—	—	—	—	—	—	—	—
Encephalitis Lethargica	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis :—											
Pulmonary					Males ..	—	—	—	—	—	—
					Females ..	—	—	—	—	—	—
					Total ..	—	—	—	—	—	—
Non-Pulmonary					Males ..	—	—	—	—	—	—
					Females ..	—	—	—	—	—	—
					Total ..	—	—	—	—	—	—

Cases of Infectious Diseases notified during the year 1928 in the Margate District.

**TABLE X.—Birth-rate, Death-rate, and Analysis of Mortality during the Year 1928.**

(Provisional Figures. The rates for England and Wales and Margate have been calculated on a population estimated to the middle of 1928, but those for the towns have been calculated on populations estimated to the middle of 1927. The mortality rates refer to the whole population as regards England and Wales, but only to civilians as regards London and the groups of towns.)

	ANNUAL DEATH-RATE PER 1,000 POPULATION.		RATE PER 1,000 BIRTHS.		PERCENTAGE OF TOTAL DEATHS.	
	RATE PER 1,000 TOTAL POPULATION.	RATE PER 1,000 LIVE BIRTHS.	TOTAL DEATHS under One Year. Hearths (under 2 Years).	DEATHS under Medical Practitioners.	Cases. Inquests. P.M. No Inquest Causes of Death.	Uncertified Deaths.
England and Wales ...	16.7	0.70	11.7	0.01	0.11	0.01
107 County Boroughs and Great Towns, including London ...	16.9	0.70	11.6	0.01	0.15	0.02
156* Smaller Towns (1921 Adjusted Populations 20,000—50,000). . .	16.6	0.73	10.6	0.01	0.08	0.01
London ... . . . .	15.9	0.53	11.6	0.01	0.00	0.30
Margate . . . . .	12.2	0.44	10.9	0.00	0.00	0.03

\* By the union of Morecambe M.B. and Haysham U.D on the 1st October, 1928, the number of Smaller Towns is increased to 156.

I have received the following Report from the Meteorological Observer :—

## METEOROLOGICAL REPORT, 1928.

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SIR,—

I beg to submit the following report relating to the Meteorological Observations at Margate during 1928.

Reviewing the year as a whole, no outstanding deviations from the normal are to be recorded, but the prominent feature of 1928 was the dry, warm, and sunny period from June to September. The average sunshine for the four months was nearly 270 hours, July being the most favoured with 318 hours.

The deviations from normal for the year are as follows :—  
+ 38 mm. of rain, + 0.63 hours of sunshine per day, and  
+ 1.8° F. mean temperature.

A monthly summary of the weather follows :—

JANUARY.—Mild on the whole, with gales on the 6th, 12th and 24th. Exceptionally high tide, accompanied by a N.W. gale on the 7th, resulting in the disastrous floods in London.

FEBRUARY.—Severe ground frosts early. Gales on the 10th and 11th, the month terminating with a spell of fine sunny weather.

MARCH.—Commenced fine and warm. Snow fell heavily 10th and 11th, lying to a depth of 8 inches on the 12th, with a low temperature. Afterwards mild and fairly fine.

APRIL.—Fair to the 14th. Severe gales 15th and 16th, with sleet. Exceptionally sunny from the 19th to end of month.

MAY.—Thunderstorms 2nd and 3rd. Sunny and warm on the whole, with rather a dull period in the middle of the month.

JUNE.—Unsettled, with heavy rainfall on the 13th and thunderstorms 11th and 15th. Sunshine above normal, with a daily average of 8.77 hours, the highest recorded for the British Isles or Channel Islands.

JULY.—An exceptionally fine month, with 318 hours of sunshine and only two days with a measurable rainfall. Shade temperature 83° F. on the 15th. Highest for the year.

AUGUST.—Warm and sunny, with sunshine slightly below normal. Thunderstorms 1st and 20th. Severe gale on 4th.

SEPTEMBER.—Exceptionally fine and dry. For the first three weeks the average daily sunshine was 9.9 hours, with no rainfall. The driest month of the year, Margate again having the highest record of sunshine in the British Isles or Channel Islands.

OCTOBER, NOVEMBER, DECEMBER.—The remainder of the year calls for no comment. Thunderstorms and gales occurred on October 20th and 21st and gales on November 16th, 23rd and 25th, with the heaviest rainfall of the year on November 2nd. Sharp frosts were experienced on December 8th to 10th, with snow on the 14th. Sunshine for the month was above normal.

The prevailing winds during the Autumn were more Southerly than is usual, although Westerly winds predominated.

A separate table is enclosed giving the hours of sunshine at various health resorts. The table gives the monthly readings, total sunshine during the months May to September, and total for the whole year.

It will be observed that during the "season" months, May to September, Margate heads the list in England with 1,282 hours, only the Channel Islands (as a whole) having a slightly higher record.

Taking the year throughout, Margate still maintains its enviable reputation both for hours of sunshine and low rainfall.

In August it was decided that ultra-violet ray tests should be taken by the Leonard Hill system. Messrs. Cleveland Bros., of the St. George's Hotel, with their usual courtesy, allowed the apparatus to be affixed to the sun-recording station, but for various reasons the position was found unsuitable, and after various tests and experiments, the apparatus was moved to the Meteorological Station. The results obtained compare very favourably with other East Coast stations, but are on the whole lower than on the South Coast. This may be attributed to early morning mists and greater cloud effects met with on the East Coast, but it is suggested that it may be partly due to the more intensive system of recording carried out at the principal South Coast stations. A report on this subject has been already submitted and it is a matter for decision as to whether this intensive system should be adopted at Margate.

The Station was inspected on June 4th and found to be in good order, with the exception of the rain-gauge, which was condemned and replaced by one of a later pattern.

J. E. TURNER,  
*Meteorological Observer.*

# Meteorological Observations

Position of Station, Lat.<sup>1</sup> 51° - 24' N. Long.<sup>1</sup> 1° - 24' E. Height above M.S.L. 51 feet. Time 9 hrs. G.M.T.

MONTH.	AIR TEMPERATURES IN °F.										RAINFALL.										SUNSHINE.									
	BARO-METER					A					B					Earth Temperatures on Grass					Rainfall.					Sunshine.				
	Max.	Min.	Mean. of A & B	Deviation from Normal	Max. Min.	Max.	Date	Min.	Max. Min.	Max.	Inches	Deviation from Normal Mm.	Max. Min.	Max.	Hours.	Days With.	Max.	Hours.	Days With.	Max.	Hours.	Days With.	Max.	Hours.	Days With.	Max.	Hours.	Days With.		
JAN.	29.92	47.4	37.8	42.6	+3.4	56	6th	30	1st	40.2	42.8	34	6.5	2.58	+23	16	2nd	19	72.4	+0.40	6.8	15th	20	5	5	5	5	5		
FEB.	30.11	49.2	38.6	43.9	+3.8	55	14th	32	7th	42.2	43.7	35	22	0.88	-13	5	2nd	22	107.7	+0.79	9.7	26th	22	5	5	5	5	5		
MAR.	29.83	49.9	40.1	45.0	+2.5	62	4th	23	12th	43.6	44.7	36	44	1.74	+4	16	11th	10	129.0	-0.27	10.0	4th	28	4	4	4	4	4		
APRIL	29.79	53.2	43.1	48.1	+1.2	67	25th	36	19th	48.0	47.6	40	40	1.57	+6	9	10th	14	172.0	-0.53	13.4	28th	26	—	—	—	—	—		
MAY	29.90	55.9	46.6	51.3	-1.3	70	28th	41	9th	53.7	52.0	44	60	2.37	+20	11	17th	11	215.8	-0.49	13.8	6th	29	—	—	—	—	—		
JUNE	29.95	64.6	51.4	58.0	-0.1	74	25th	44	17th	59.9	57.1	48	52	2.06	+7	14	13th	11	263.1	+1.39	15.2	3rd	30	—	—	—	—	—		
JULY	30.09	72.3	57.4	64.9	+2.8	83	15th	50	29th	67.8	63.3	55	25	0.98	-25	11	27th	6	318.0	+2.99	15.2	12th	31	—	—	—	—	—		
AUG.	29.96	69.8	57.2	63.5	+1.4	79	11th	51	21st	65.1	64.4	55	31	1.20	-18	8	1st	12	224.7	+0.55	13.7	14th	30	—	—	—	—	—		
SEPT.	30.11	65.7	54.8	60.3	+1.5	80	5th	48	21st	62.6	63.4	52	17	0.66	-33	8	28th	5	260.7	+3.01	12.5	4th	30	—	—	—	—	—		
OCT.	29.86	58.6	49.1	53.9	+2.1	67	7th	42	29th	54.1	57.7	46	83	3.28	+9	16	21st	19	102.8	-0.42	9.9	1st	27	—	—	—	—	—		
NOV.	29.77	53.6	45.3	49.5	+4.0	59	11th	36	10th	49.3	53.0	42	89	3.50	+29	29	2nd	17	64.6	-0.05	7.5	18th	23	—	—	—	—	—		
DEC.	30.03	45.0	37.8	41.4	+0.3	54	25th	30	9th	42.7	47.4	35	87	3.42	+28	19	29th	16	51.9	+0.06	6.9	7th	15	3	3	3	3	3		
Averages and Absolutes		29.94	57.1	46.6	51.8	+1.8	83	July 15th	23	March 12th	52.4	53.0	43	51	Total 24.24	+3	29	Nov. 2nd	16.2	165.2	+0.61	15.2	June 3	311	17	17	17	17	17	
1927	29.84	55.7	45.8	50.7	—	—	—	—	—	51.9	52.5	42.5	71.8	28.26	—	—	—	—	—	—	—	—	—	305	20	20	20	20	20	
1926	29.88	55.6	47.1	51.9	—	—	—	—	—	52.7	53.5	43.9	46.3	21.86	—	—	—	—	—	—	—	—	—	—	299	12	12	12	12	12

**Comparative Table of Hours of Sunshine Monthly during 1928 at various Health Resorts  
and London and Total Rainfall for the Year.**

STATION.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	Total Sunshine Hours. May to Sept.	Total Sunshine Hours. 1928.	Total Rainfall 1928. Inches.	REMARKS.
BATH ...	71.6	100.6	84.6	151.5	161.8	194.1	259.7	182.9	197.7	121.2	59.1	42.4	996.2	1628.7	34.74	
BOURNEMOUTH ...	82.1	114.2	119.6	150.0	165.2	208.2	270.8	184.1	241.8	133.9	75.6	62.6	1070.1	1808.1	36.43	
BRIGHTON ...	66.6	126.4	120.5	154.2	207.7	240.6	302.1	224.7	240.0	115.6	66.9	58.5	1215.1	1925.1	38.12	
CLACTON ...	72.2	90.3	106.1	151.5	203.0	248.7	310.0	208.3	235.5	123.3	65.4	54.2	1205.5	1870.2	25.03	
CHANNEL ISLANDS	66.3	142.0	133.6	171.3	213.5	251.4	329.8	230.6	258.9	157.7	50.1	56.1	1284.2	2042.2	43.16	Jersey and Guernsey
DOVER ...	66.9	104.6	120.9	161.7	196.2	241.5	204.8	218.8	244.5	103.2	71.4	61.6	1195.8	1892.2	35.01	
EASTBOURNE ...	68.5	122.0	133.9	155.4	203.9	261.6	320.5	238.0	236.7	119.3	68.7	63.2	1260.7	1991.0	31.73	
FOLKESTONE ...	60.4	105.8	119.0	155.4	201.1	249.9	289.5	219.1	233.4	98.8	65.4	59.5	1193.0	1859.2	33.48	
HASTINGS ...	66.3	117.1	127.7	150.6	218.5	259.2	319.6	239.6	238.8	116.2	68.1	61.3	1275.7	1983.7	38.10	Taken at St. Leonard's
HFRACOMBE ...	40.3	72.0	92.3	165.9	194.6	181.2	237.1	193.7	206.4	83.7	42.9	20.7	1013.0	1529.8	40.35	
LONDON ...	57.9	86.1	91.6	130.8	164.6	210.9	290.1	200.5	200.1	111.9	55.5	46.8	1066.2	1650.6	25.11	
MARGATE ...	72.4	107.7	129.0	172.0	215.8	263.1	317.7	224.7	260.7	102.6	64.5	51.7	1282	1983.7	24.25	
RYDE ...	77.8	118.0	106.0	151.2	185.3	237.3	303.4	234.3	222.3	131.4	74.1	57.0	1182.6	1899.5	37.59	
SCARBOROUGH ...	50.5	96.2	71.8	144.0	164.9	201.9	257.3	181.0	150.9	103.8	55.2	45.8	956.0	1522.5	27.70	
SOUTHEND ...	64.4	100.0	108.1	142.2	208.6	244.2	311.5	199.3	236.7	116.2	68.4	58.5	200.3	1859.2	22.3	
TORQUAY	76.6	96.2	124.0	168.3	202.1	181.8	287.6	198.0	230.1	145.7	72.3	62.0	1099.6	1844.7	35.73	
TUNBRIDGE WELLS	61.3	116.2	101.3	136.5	188.7	231.0	314.9	218.6	227.1	103.2	66.6	45.8	1180.3	1811.7	33.88	
YARMOULD ...	55.8	96.2	105.0	159.3	181.3	213.3	273.4	200.8	221.7	113.4	59.7	52.7	1090.5	1734.8	23.42	